Welcome to the US EPA's webinar on using compost as a stormwater BMP

March 10, 2009

Agenda

- Information about the call
- A Quick Introduction to Soils and Compost
  - Chris Newman, US EPA Region 5
- Introduction to the USCC STA program
  - Al Rattie, AR Consulting
- Stormwater BMP Standards
  - Britt Faucette, Filtrexx International
- The Composter's Perspective
  - Sharon Barnes, Barnes Nursery
- The Purchaser's Experience
  - Ginny Black, Minnesota Pollution Control Agency

Notice

This presentation has been provided as a part of the U.S. Environmental Protection Agency's series of webinars on using compost as a stormwater best management practice. This document does not constitute EPA policy. Mention of trade names or commercial products does not constitute endorsement or recommendation for use. Links to non EPA web sites do not imply any official EPA endorsement of, or a responsibility for the opinions, ideas, date or products presented at those locations or guarantee the validity of the information provided. Links to non-EPA servers are provided solely as a pointer to information that might be useful to EPA staff and the public.

A few things worth mentioning

- Mute your phone during the call
- Do not place the call on hold
- Send you questions to the moderator via the chat feature; do not ask them during the call.
- This call is being recorded.
- Mute your phone during the call

A few things worth mentioning

- You will be sent a link to a recording of the call in the next few days. It will be good for 30 days.
- We expect the call to last 1 to 1 ½ hours or so. Please feel free to drop off early if you need to.
- Presentations, and other resources, for this call series will be posted at: www.epa.gov/reg5rcra/wptdiv/solidwaste/recycle/compost/webinars.html

Asking Questions During the Call

- The speakers will answer a few selected questions at the end of their presentation
- Pease do not ask questions during the presentation.
- Post questions using the chat box under the participant box on the right side of the screen
- The moderator will then ask the speaker the question.

~~An~~ Quick Introduction to Soils and Compost

Using Compost as a Stormwater Best Management Practice

Chris Newman
EPA Region 5

Introduction to Soils

- Soil quality is key to plant survival
- There are many factors that can effect soil quality. One that we are focusing on today is:
  - Organic matter content (OM)
- Soils can be degraded due to:
  - Erosion
  - Overuse/nutrient depletion
  - Disturbance
- The less degraded the soil, the more productive it can be

Organic Matter Content

- Organic matter (OM) is the fraction of the soil derived from plants, animals, and microorganisms
  - Raw plant residues or microorganisms
  - Active OM
  - Stable OM (humus)
- Functions of OM:
  - Stores nutrients
  - Promotes good soil structure
  - Maintains tilth
  - Minimizes erosion
- 'Ideal' soils contain about 5% organic matter

Organic Matter Content of Soil

- Organic matter content can effect:
  - Cation exchange capacity
  - pH
  - Soil bulk density
  - Water holding capacity
  - Plant diseases/pathogens
  - Susceptibility of soils to erosion
- Building soil OM with compost can help improve these soil characteristics which can lead to improved plant growth

What is Compost?

- Compost is aerobically decomposed organic materials
- Organic materials can be:
  - Yard wastes
  - Food wastes
  - Animal manure/Agricultural wastes
  - Biosolids
- The composting process uses time and temperature to:
  - Degrade the organic materials create a product indistinguishable from the original
  - Kill pathogens and weed seeds
  - Make the OM in the final product more stable than it originally was

What are the Compost BMPs?

- A set of three best management practices that:
  - Help improve water quality
  - Increase water infiltration
  - Reduce erosion
- The compost stormwater BMPs do this with:
  - Berms
  - Blankets
  - Socks

Benefits of Compost in Stormwater BMPs

- Compost retains a large volume of water
  - Prevents or reduces rill erosion
  - Reduces runoff volume
  - Promotes establishment of vegetation
- Compost improves downstream water quality by retaining/adsorbing pollutants
  - Heavy metals, nitrogen, phosphorus, oil and grease, fuels, herbicides, and pesticides
  - Nutrients and pollutants are decomposed by naturally occurring microorganisms

Benefits of Compost in Stormwater BMPs, cont.

- Compost improves soil structure and nutrient content
  - Reduces need for chemical fertilizers, pesticides, and herbicides
- Compost-based BMPs remove as much or more sediment and pollutants from stormwater as traditional perimeter controls, such as silt fence
  - Allow a larger volume of clear water to pass through
- Think of the compost BMPs as another tool
  - They can be used with other stormwater BMPs to meet your project needs.

Compost Quality

- Use sanitized, mature compost with no identifiable feedstock constituents or odors
- Must meet all local, state, and federal quality requirements
- Specifications for EPA's BMPs are at- http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm
  - Enter 'compost' into the search line
- Many states may have compost quality regulations, or regulations that effect the use of compost in this application. Check with them as part of your planning to use these BMPs.